# APPLICANT INFORMATION AND PROJECT SUMMARY FORM

1. **Name of Applicant(s):** Georgetown Lake Homeowners Association

2. **Project Title:** Georgetown Lake State of the Lake Study Plan

3. **Type of Entity:** Nonprofit 501(c)3

- 4. Description of Project Location: Georgetown Lake is located on private and public lands in the headwaters of the Flint Creek watershed, tributary to the Clark Fork River about 18 miles west of Anaconda.
- 5. Injured Natural Resource(s) and/or Impaired Services to be Restored,
  Rehabilitated, Replaced or Equivalent Acquired through Project: This proposal is a
  monitoring and research development project. Efforts completed under this project are
  focused on developing a work plan to characterize the state of Georgetown Lake. This
  project will focus on the water quality and aquatic resources of the Georgetown Lake
  including water quality, aquatic biology and habitat, and water level. No new data will
  be collected if this proposal is funded. However, existing data would be compiled and
  used for identifying and filling data gaps as part of the work plan. A detailed sampling
  and analysis plan would be prepared if this proposal is funded as well as full application
  requesting funding for a 1 to 2 year study of the lake supported and led by a collaborative
  group of partners. Results of the study would be used to provide a clear baseline
  characterization of the lake, protect or improve water quality, improve or protect the
  fishery, and address habitat issues associated with excessive aquatic plant growth and
  water level.

#### 6. Authorized

Representative:	Jan Christensen President or Chuck Stokke Board Member							
	(Name)		(Title)					
Mailing Address:	P.O. Box 643							
	(Street/PO Box)							
_	Anaconda, MT	59711	406-563-6026					
	(City/State/Zip)		(Telephone)					
<b>Contact Person:</b>	Scott Payne		Member					
Contact I erson.	•							
	(Name)		(Title)					

 Mailing Address:
 P.O. Box 636

 (Street/PO Box)
 406-842-7224

 (City/State/Zip)
 (Telephone)

 E-mail Address:
 kirkenv@3rivers.net

#### 7. Proposed Funding Sources

On the table below, enter the source and amount of all funding that may be used for this project. Indicate all potential sources of funds that you intend to apply for this project, even if you have not yet applied for the funds or have not yet received a commitment from the source. Indicate whether matching funds are cash or in-kind.

		Amount in (\$) Dollars						Matching	
	Commited Funds						Fund Percentage		
Funding Source		Grants -		Non-Grant Funds		Uncommitted Funds	Total	(Funding Source	
		Grants	Cash	In-kind			Total/Project Total)		
	UCFRB Restoration								
A.	Fund	\$	22,350.00				\$	22,350.00	91.79%
B.	Homewowners				\$ 2,000.00		\$	2,000.00	8.21%
C.	·								
D.	·								
E.	·								
F.									
G.									
H.									
I.									
No	n-NRDP Totals	\$	22,350.00		\$ 2,000.00		\$	2,000.00	8.21%

#### 8. Estimated Total Project Cost \$24,350.00

(Automatically Calculated from spreadsheet above)

#### 9. Private (non-Governmental) Grant Applicant Financial Information

a.	Are there any lawsuits, judgments, or obligations pending for or against you?	<u>No</u>
b.	Have you ever declared bankruptcy? <u>No</u>	
c.	Are any of your tax returns delinquent or under dispute? No	
d.	Any unpaid deficiencies? No	
e.	Are you a party to a lawsuit? No	
f.	Do you have any other contingent liabilities? <b>No</b>	
g.	Do your current and deferred liabilities exceed the value of your assets?	No

Explain all  $\underline{YES}$  answers in a statement attached to this form. Explain all  $\underline{YES}$  answers in a statement attached to this form.

Certification for Individuals or Private Entities							
I (We) the undersig application for a grant from complete and accurate to the Montana to investigate my Individual(s): Charles Stokke	n the UCFRB Restorate he best of my (our) kn	nowledge and I (we) aut	fy that the statement is horize the State of				
Name	Social Security No.	Signature	Date				
Name	Social Security No.	Signature	Date				
Social Security Numbers v Private Entities	vill be kept confident	ial.					
Name of Authorizing Agent	Federal Tax ID No.	Signature	Date				
	An authorized agent/agents representing the applicant must by his/her signature indicate that the application for funds and expenditure of matching funds, as represented, is officially authorized.						
<b>Grant Authorization</b>							
I hereby declare that the information included in and all attachments to this application are true, complete, and accurate to the best of my knowledge, and that the proposed project complies with all applicable state, local, and federal laws and regulations.  I further declare that, for Georgetown Lake Homeowners Association, I am legally authorized to enter into a binding contract with the State of Montana to obtain funding if this application is approved. I understand that the Governor must authorize funding for this project.							
GTL Homeowners Project Sponsor		Date	_				
Authorized Representative (signature) Title							

#### PROPOSAL ABSTRCT

**Applicant Name:** Georgetown Lake Homeowners Association **Project Title:** Georgetown Lake State of the Lake Study Plan

The Georgetown Lake Homeowners association has 646 members all of which cherish and respect Georgetown Lake as one the most important recreation areas of Montana. The Homeowners Association and its partners believe Montana is changing, growing rapidly, and that a state of the lake study is needed because measures and actions should be planned and implemented to protect, preserve, and enhance all aspects of Georgetown Lake. Georgetown Lake is a popular recreation area for boating, fishing, camping, kiteboarding, among many other outdoor activities. Georgetown Lake is the largest lake in the Upper Clark Fork River Basin at over 2,800 acres and is situated at an elevation of 6,429 feet above mean sea level providing an alpine-like setting for recreationists. The lake is surrounded by the Flint Creek Range to the north and the Pintlers to the south. A state of the lake study is proposed to bring past and ongoing data into one report and develop plans to collect new data to tackle suspected water quality issues, fishery protection, excessive aquatic plant growth, and water level concerns related to protecting aquatic habitat. Currently, there is not a lot known about the current conditions of Georgetown Lake. Nearly all of the past data for the lake is dated and only limited new data was recently collected by MDEQ in 2007. It is known the lake is very popular and everyone loves the resources. However, concerns about water quality, excessive aquatic plant growth, and development are regularly discussed by the Georgetown Lake Homeowner Association board of directors. A clearer characterization of these concerns is needed. A three task strategy is proposed for this project development grant which will yield a study plan, partnership with basin stakeholders and agencies, compilation and review of existing data, preparation of an NRDP full application for project implementation, and grant administration. A total of \$22,350 dollars are requested from NRDP to complete the 3-month long project. \$2,000 in matching in-kind support is proposed to cost-share this project. Other in-kind matches are anticipated but will not be tracked since they cannot be quantified at this time. Additional funding remedies will be sought and considered as part of this process.

#### **TECHNICAL NARRATIVE**

**Applicant Name:** Georgetown Lake Homeowners Association **Project Title:** Georgetown Lake State of the Lake Study Plan

#### A. Project Need and Definition

The Georgetown Lake Homeowners association has 646 members all of which cherish and respect Georgetown Lake as one the most important recreation areas of Montana. As one of the largest nonprofit organizations in the Upper Clark Fork River Basin (UCFRB), the homeowners and its partners believe Montana is changing, growing rapidly, and that this project is needed

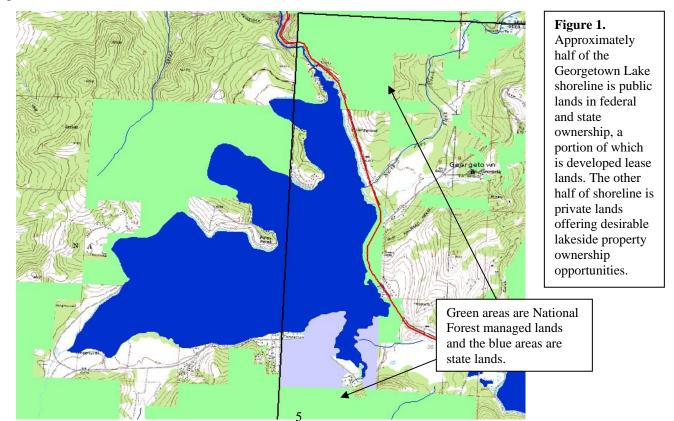
because measures and actions should be planned and implemented to protect, preserve, and enhance all aspects of Georgetown Lake. Example resources needing protection for future generations are water quality, aquatic resources, and biologic sustainability of the lake.

This project brings together past and ongoing efforts, most of which were completed in the 1970's and 1980's (see section H). The past efforts are useful to characterize past lake water quality and biology, but current assessment work is needed to expand past efforts to compare, contrast lake conditions as well as established comprehensive baseline for Georgetown Lake. The study plan will be designed to ensure that the state of the lake study is led by a broad and collaborative partnership interested in taking a crucial snapshot of resource conditions needed to characterize existing conditions, develop a long-term monitoring strategy, and implement future restoration and preservation actions related to the aquatic resources of the lake.

#### B1 and B2. Current Conditions and Underlying Causes

The goal of this project is to develop a state of the lake study plan. This is a critical step to protect and enhance the aquatic resource of Georgetown Lake.

Georgetown Lake is a popular recreation area for boating, fishing, camping and kiteboarding in the UCFRB. It's the largest lake in the Upper Clark Fork River basin at over 2,800 acres and is situated at an elevation of 6,337 feet above mean sea level providing an alpine-like setting for recreationists. The lake is surrounded by the Flint Creek Range to the north and the Pintlers to the south. Hunting, backpacking, snowmobiling, and skiing are popular outdoor sports in the area. Both private and USFS Beaverhead-Deer Lodge managed lands surround the lake (Figure 1).



The excellent recreation opportunities and proximity to three major cities is Montana results in development and high use of the area. As development of the shoreline and surrounding hills increase, the Georgetown Lake Homeowners believe there is a distinct possibility that lake natural resources may be impacted - or they may have already been impacted. Figure 2 shows the current private property parcel map for the Georgetown Lake area.

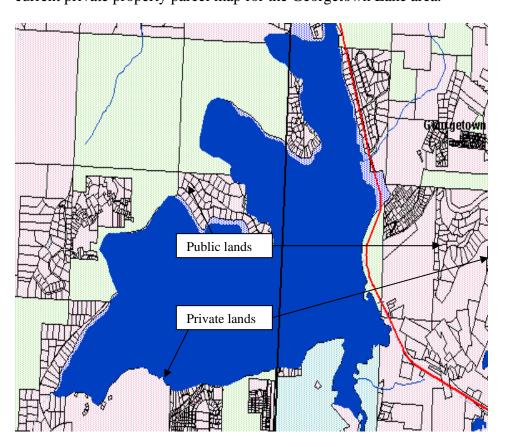


Figure 2. This figure shows the current number of lots developed around the lake. Development in the Georgetown Lake area is a concern because the fishery, water quality, and wildlife may be impacted from uncontrolled growth. The homeowners want to protect water quality and a state of the lake project is proposed to characterize current conditions and make recommendations to protect water quality in the future.

Summarized in Section H below are the technical documentation available for the lake, most of which is published scientific data for Georgetown Lake collected in the 1970's and 1980's. In 2007, the Montana Department of Environmental Quality (MDEQ) is completed some short-term focused water quality sampling efforts for nutrients. All of the past and ongoing lake characterization efforts are important. However, none of the past or ongoing efforts target understanding the controlling factors for threats to the lake nor do they provide direction for action or long-term monitoring. A state of the lake study is needed to bring past and ongoing data into one report and collect new data to determine how to mitigate threats / impacts to water quality, the fishery, excessive aquatic plant growth, water level, and recreation. In summary, the Georgetown Lake area has changed significantly over the last 20 years due to development and a state of the lake study is needed to provide the foundation for actions needed to protect the lake.

In summary, there is scant knowledge about the current conditions at Georgetown Lake to guide informed management, especially during the fall, winter, and spring seasons. Nearly all of the past data for the lake is dated, collected during the summer, such as the data collected by MDEQ for 2007.

What is known is that the lake is very popular and everyone loves the natural resources. There are concerns about water level, excessive aquatic plant growth, and development and they are regularly discussed by the Georgetown Lake Homeowners Association board of directors. A comprehensive characterization of these concerns is needed and is proposed in this application. This is not intended to be part of litigation efforts to regulate water levels, but rather to relate water levels, water quality and aquatic resources.

#### **B3. Desired Future Conditions**

The desired future conditions for Georgetown Lake are not known at this time but as part of this project they would be flushed out if this grant is approved. A better understanding of current conditions and input from the homeowners, basin stakeholders, and partners is needed to clearly define desired future conditions. Overall, all involved parties want to sustain and protect the existing excellent fishery, the generally good water quality, and high quality recreation setting as it related to aquatic resources. Narrative desired future conditions will be developed as part of this planning project to define these desires and include them in the study plan. The goal will also be to quantify desired future conditions for water quality, the fishery, and water level. Once sufficient data is available it can be used as metrics to future generations and long-term monitoring for gauging the state of the lake. Adopting clear and quantitative desired future conditions will provide benchmarks needed to demonstrate improvements or degradation in the project focus areas (Appendix A).

#### C. Project Implementation Plan and Time Schedule

The following is a summary of the tasks to be completed for this project. All tasks are anticipated to be reasonably implemented and meet the goals listed below.

Goal: Engage interested agencies and stakeholders to help plan and prepared the study plan.

## Task 1. The homeowners will forge a collaborative partnership to review and provide input on the state of the lake study plan strategy and methods

While the general objectives and problem statement is provided above, this task will further refine the technical objectives of the study according to stakeholder involvement. Furthermore, the match provided by the Georgetown Lake Homeowners Association supports communication between the homeowners, MDEQ TMDL division, Montana Tech Environmental Engineering Department, Beaverhead Deer Lodge National Forest District Ranger, UM Riverive Center, and the Montana Fish Wildlife and Park, and others as they participate in the collaborative effort. Two meetings have been held and an email list of interested participants is compiled. This list of participants will be expanded and made official as part of Task 1 outreach efforts. There is a desire to move the planning process forward and Task 1 will be used to bring together these and other interested participants together in a series of meetings scheduled for fall of 2007 and winter 2008. Matching money not NRD money will be used for this task.

Goal: Summarize past and ongoing studies to evaluate trends in the lake conditions, evaluate methods and application of past data, and identify data gaps for the proposed study plan.

## Task 2. Compile and evaluate all reasonably accessible, useful, existing, and ongoing data associated with Georgetown Lake and incorporate data into one GIS database.

Section H below lists the past studies completed on Georgetown Lake and MDEQ is reported to have completed some focused summer time water quality testing on the lake in 2007. This task will bring this data together, the locations, and usability in order to evaluate the data and help determine what new data are needed to characterize and address the focus areas outlined Appendix A. The study plan will describe the past and ongoing data collection and propose how to fill data gaps for the study objectives.

Goal: Develop a clear plan for collecting and analyzing data and information needed to complete the state of the lake study.

## Task 3. Prepare a detailed study plan, maps, methods, and strategy for implementing the state of the lake study.

Appendix A summarizes the three areas the study plan will focus on for characterizing the state of the lake study. A detailed summary of the existing conditions will be completed based on past efforts (Task 2) and they will be dovetailed with the plans for completing the proposed study. The decision logic supporting collecting new data and the methods / technical approach for completing the study will be defined in the study plan. As part of the study plan, quality control and data handling will be discussed as well as a means to publish the data on-line for transparent analysis by basin stakeholders. Roles and responsibilities will be defined in the study plan where some entities, such as MFWP may agree to lead the fishery assessment if they choose. As part of the state of the lake study plan, a long-term monitoring approach and strategy will be developed to track trends in the five project areas described in Appendix A.

Goal: Request funding to implement the state of the lake study plan.

#### Task 4. Prepare a full application for implementing the study plan.

The state of the lake study implementation cost is not known at this time. However, funding will be needed to complete the effort. NRDP funding as well as grants and in-kind funding from other sources and agency partners will be sought to complete this effort. The goal is to implement the study plan in 2009 and 2010.

Goal: proper grant administration and cost tracking.

#### Task 5. Manage contractors and grant funds.

The Georgetown Lake Homeowners Association Board of Directors will manage the contractors and grant funds to the satisfaction of the NRDP. Monthly reports will be prepared and submitted to the NRDP for payment and monitoring project progress.

The proposed project is divided into the five (5) tasks listed below. The project implementation schedule is proposed be completed in six months as shown below and assumes that project funding is available on December 15, 2007 (e.g., the project start date). The project is expected to be completed by March 1, 2008.

Task	Dec 07	Jan 08	Feb 08	Mar 08
Task 1. Forge Partnership & meetings				
Task 2. GIS database development				
Task 3. Prepare study plan				
Task 4. Prepare full NRDP grant &				
possible after grants				
Task 5. Administer grant				

#### E. Describe Methods and Technical Feasibility of the Proposed Project

A discussion of the monitoring methods and technical feasibility of this proposed project is premature. Standard protocols can be used to sample water quality, study the fishery and aquatic plants, and aquatic habitat. Following this approach the technical feasibility can be thoroughly evaluated and documented. Further, a review is needed of the past and ongoing methods used to see if they adequately meet the spirit of this state of the lake study. For example, detection limits for water quality samples while useful for some applications are inadequate for other applications because they exceed certain thresholds for comparison. To this end, the existing data needs to be compiled and reviewed for usability.

The usability of the data that are compiled or collected as part of this project will be linked to recommendations and the data will eventually be used to support actions that protect, preserve, and enhance Georgetown Lake. The data not only has to be of sufficient quality, but also spatially and temporally inclusive so the decision logic and overall goals contained in the study plan realized.

#### F. Describe the Monitoring Plan

Monitoring of this project will consist of monthly progress reports submitted to the NRDP by the Georgetown Lake Homeowners Association. The NRDP will be invited to all planning meetings for technical input on the study plan development.

#### G. Describe Qualification of the Project Team

Current active technical participants on the project include Dr. Rick Appleman of Montana Tech's Environmental Engineering Department and Scott Payne of KirK Engineering & Natural Resources, Inc. (and member of the Georgetown Lake Homeowners Association). Both Rick and Scott have significant lake related professional experience on water quality and fishery issues. Other members potentially associated if the project is funded with significant experience working on lake studies include Dr. William Woessner Chairman of the UM Riverine Center (<a href="http://www.umt.edu/rivercenter/">http://www.umt.edu/rivercenter/</a>), biologists Brad Liemann /and Ray Vinkey of the MFWP, and water quality specialist Darrin Kron of MDEQ.

Other entities contacted with technical experience in natural resource management are Charlene Bucha Gentry District Ranger for the Beaverhead Deer Lodge National Forest.

The proposed project team has significant experience from private, higher education, and government agencies. The technical oversight, document preparation, and grant administration will be put out for limited solicitation procurement to complete the study plan. A limited solicitation will be completed in the summer of 07 to complete this project on behalf of the Georgetown Lake Homeowners Association, provide administrative reporting through contracted services, and prepare the NRDP full application. The contractor will be lead by the Georgetown Lake Homeowners Association board of directors, who are the ultimate responsible party on this grant.

Implementation services for the state of the lake study is not determined but most likely will end up being a combination of higher education and student research projects, state agency services performing work outside of their normal operations, and private consulting services hired by the Georgetown Lake Homeowners Association. These plans will be outlined in the state of the lake study plan.

#### **H.** Technical Documentation

Dr. Rick Appleman of Montana Tech completed a detailed literature review for Georgetown Lake in January 2007. Below are the published papers to be reviewed if this grant is funded. Other non-published data from agencies may be available and new data will be collected by MDEQ in 2007. Surprisingly, most of the existing published data is relatively old dating back to the 1970's, 1980's, and early 1990's.

#### 1993

Trabert, Mike J.

The Depletion of Oxygen in Georgetown Lake, Montana During the Winter Months

Thesis, Montana College of Mineral Science and Technology

#### 1985

Boveng, Peter Laurens

Effects of nutrient enrichment on Georgetown Lake plant communities

#### 1984

Garrett P.

Clean Lakes Project, Georgetown Lake, Phase 1/ Final Report. EPA Report.

#### 1983

Garrett, Paul Allen

Relationships between benthic communities, land use, chemical dynamics, and trophic state in Georgetown Lake

#### 1981

Knight J.C.

An Investigation of the General Limnology of Georgetown Lake, Montana.

Thesis, Montana State University, Bozeman

#### 1977

Geer, William Herbert

The population dynamics and production of the net zooplankton in Georgetown Lake, Montana in 1974

#### 1977

Environmental Protection Agency. Region VIII.

Report on Georgetown Lake, Deer Lodge and Granite Counties, Montana: EPA Region VIII

#### 1976

Knight, J.C., Garrison P.J., Wright J.C.

An investigation into the Extent and Cause of Eutrophication in Georgetown Lake, Montana. Report No. 77, Montana State University, Bozeman

#### 1976

Foris, William Joseph

A comparison of diatoms on horizontal and vertical substrates in Georgetown Lake, Montana

#### 1976

Garrison, Paul Jackson

The Role of the Bottom Sediments in the Eutrophication of Georgetown Lake, Montana Thesis, Montana State University, Bozeman

#### 1975

Knight, Jonathan C.

An investigation into the extent and cause of eutrophication in Georgetown Lake, Montana

### **CRITERIA STATEMENTS**

**Applicant Name:** Georgetown Lake Homeowners Association **Project Title:** Georgetown Lake State of the Lake Study Plan

Criteria statement 1: Relationship of Expected Costs to Expected Benefits

The total cost of conducting this project is \$24,350, of which the NRDP is requested to fund \$22,350. The cost share is estimated at \$2,000. The expected benefits include development of a detailed study plan for a state of the lake study of Georgetown Lake, a functional partnership with basin stakeholders interested in protecting and enhancing Georgetown Lake, and a full application and identification of other funding needed to implement the study plan. From this effort, and eventual implementation of the anticipated study plan actions, there are likely future benefits to recreation, water quality, and the fishery expected. The benefits cannot be quantified cost-wise at this time because this effort is the in a very early planning stage. Therefore, this grant will allow the lake restoration planning process to move forward and produce tangible results in the future.

Potential direct benefits include public awareness of and interest in protection and enhancement strategies for Georgetown Lake and the Upper Clark Fork River Basin as a whole. Additional benefits include development of plans and partnerships that will allow restoration strategies to be implemented.

Criteria Statement 2: Cost-Effectiveness / Alternatives

This project has three potential alternatives in terms of evaluating cost effectiveness.

- 1. No Action. The no action alternative is the least costly at this time and would result in nothing progressing in terms of developing a study plan or action plan to protect and enhance the lake aquatic resources. This alternative was not selected because the homeowners has determined that it is in the public's best interest take a leadership role in protecting and preserving Georgetown Lake for future generations. In summary nothing is gained by not attempting this effort and action is needed now because of the increased pressure from more people and dense development in the area. Lastly, the existing information is incomplete and dated and cannot be used to make recommendations for protecting the lake. No action at this time could be more costly in terms of future resources.
- 2. Encourage Another Organization to Complete the Study. This alternative would target working with others to take a lead role in completing the study. This alternative was not selected for two reasons. First, another organization that embraces studying all of the study areas described in Appendix A is not available. The homeowners care about all aspects of Georgetown Lake and its aquatic resources. Second, this alternative was not selected because the Georgetown Lake Homeowners Association has 646 members making is a large basin group. Because it's such a large group with a vested interest in the Lake, it's in their best interest to take a lead role in completing the study. While all Montanans stand to be impacted if Georgetown Lake changes, the homeowners have not only a philosophical connection to the lake but also they stand to loose because they are property owners as well. In summary, the homeowners are taking a leadership role and inviting others to their meetings to develop plans that protect, preserve, and enhance the Georgetown Lake aquatic resources.
- 3. **Proposed Alternative Prepare a Study Plan.** The preferred alternative would be to fully fund this project to develop partnerships and public interest in planning this study; prepare a database, study plan and, and NRDP full application; and eventually develop implementation plans for characterizing aquatic resources and planning restoration of aquatic resources if appropriate. This alternative also allows stakeholders to be involved and time to become comfortable with strategies proposed for implementing the state of the lake study.

Criteria Statement 3: Impacts to the Environment and Human Health and Safety

This project involves attending meetings, project development, and some outreach activities. No impact to the environment or human health and safety is identified because this is a planning effort.

#### Criteria Statement 4: Public Support

Public support for the proposed project development and study plan has been discussed in several meetings setup by the Georgetown Lake Homeowners Association dating back to late 2006 and early 2007 and the project received support from over 150 members who attended the general membership meeting in February 2007. In addition, letters of support have been requested and they are being sent directly to the NRDP.

Criteria Statement 5. Public Access

Public access is not relevant to this planning project because a study plan is the primary deliverable.

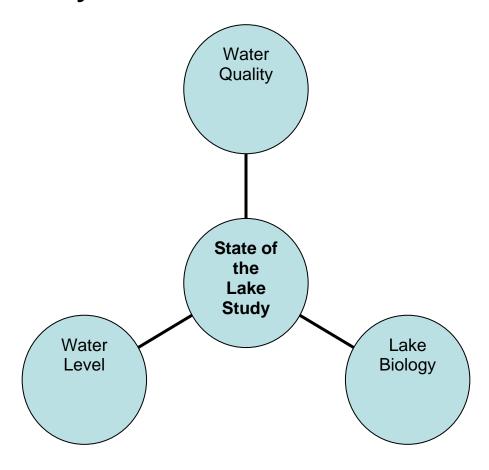
#### PROPOSAL BUDGET

**Applicant Name:** Georgetown Lake Homeowners Association **Project Title:** Georgetown Lake State of the Lake Study Plan

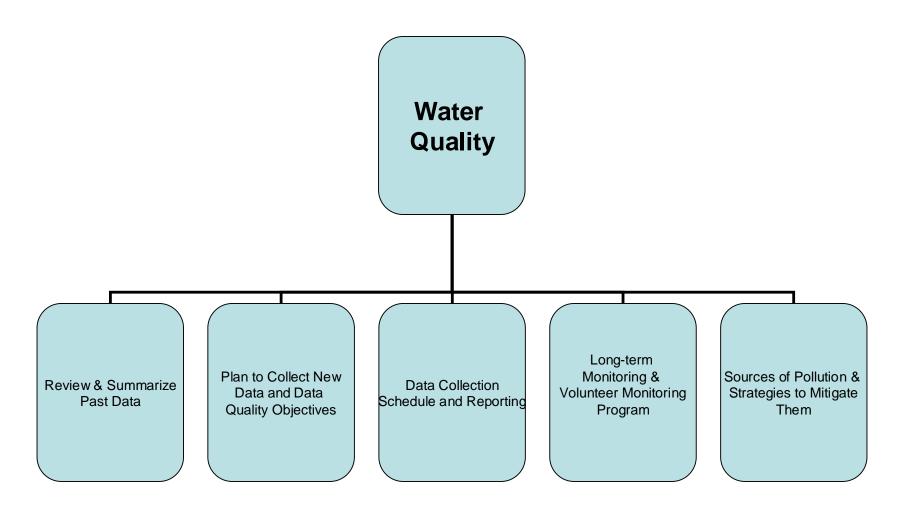
The attached Excel spreadsheet contains the proposed project budget. The proposed project provides a general estimate for tasks need to complete the project. The homeowners will support the partnership (Task 1). Others participating in Task 1, such as Montana Tech are anticipated to provide additional match. However, these matches are not quantified at this time because the value of these in-kind contributions can't be guaranteed at this time. Participation and a public meeting sponsored by the homeowner will provide the required match for this project and will be documented.

# Appendix A PowerPoint Slide of the Three State of the Lake Study Areas

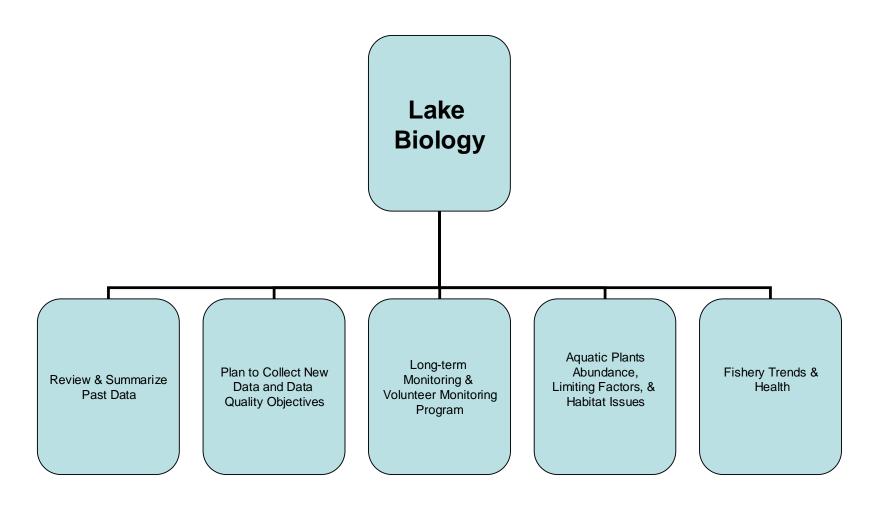
# Georgetown Lake 2008 – 2009 State of the Lake Study & Recommendations



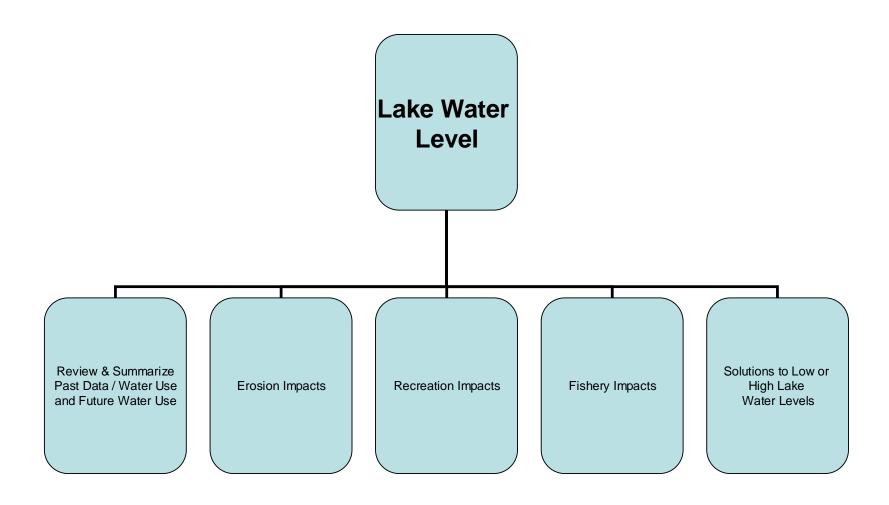
# Water Quality Focus Area



# Aquatic Biology Focus Area



## Water Level Focus Area



PROJECT BUDGET SUMMARY FORM								
	UCFRB	APPLICANT CONTRIBUTION		OUTSIDE SOURCES				
EXPENSE CATEGORY	FUND	Cash	In-Kind	Subtotal	Cash	In-Kind	Subtotal	TOTAL
SALARIES AND 1 WAGES								
2 FRINGE BENEFITS								
CONTRACTED 3 SERVICES	\$21,500.00		\$2,000.00	\$2,000.00				\$23,500.00
SUPPLIES AND 4 MATERIALS	\$150.00							\$150.00
5 COMMUNICATIONS	\$100.00							\$100.00
6 TRAVEL	\$600.00							\$600.00
RENT AND 7 UTILITIES								
8 EQUIPMENT								
9 MISCELLANEOUS								
TOTAL	\$22,350.00		\$2,000.00	\$2,000.00				\$24,350.00

In electronic form this spreadsheet will automatically calculate the expense totals from the following Budget Detail Form.